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MEETING OF THE COUNCIL OF PROVINCIAL ENERGY MINISTERS (CPEM)

ENERGY SECURITY IN CANADA

Report of the Intergovernmental Working Group on Energy Security

Intergovernmental Working Group on Energy Security

August 24 (a.m.), 1987
ST. JOHN'S, Newfoundland

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Energy Security in Canada
Report to Ministers

1. Attached are summaries of papers prepared by the federal, provincial and territorial governments on the issue of energy security in Canada. These papers have been reviewed by a working group of officials representing all the governments which participated in the January 30, 1987 meeting of Energy Ministers in Ottawa.

2. The papers represent an overview of energy security in its national and regional dimensions. While they reflect differing perspectives on the energy security issue, four areas of common agreement emerge.

   - First, energy security is an important aspect of energy policy which all governments should support.

   - Second, an adequate policy addressing energy security involves a balanced mix of cost-effective planning for emergencies with a policy of encouraging the development of Canada's energy resource potential (including conservation and renewable energy) within an economic framework.

   - Third, while potential disruptions to oil supply remain the focus of concern, energy security issues affect all commodities, not only petroleum.

   - Finally, policies for energy security cannot deal with supply and demand alone. Adequate infrastructure must be available to deliver energy commodities to consumers in emergencies, as well as to contribute to the increased competitiveness of energy markets on an ongoing basis.

The International Dimension

3. The papers also reflect, in different ways, a common recognition that energy security is an international problem. As both an importer and an exporter of energy, Canada has an important interest in the stability of international energy markets. This view of our international interests is reflected in the Government of Canada's discussion of Canada's

membership in the International Energy Agency. An important foreign policy commitment, membership in the IEA involves cooperation with our closest allies and trading partners, both in terms of commitments to coordinated action in the event of an oil supply disruption and in terms of discussing the evolution of Canadian energy policies in the context of overall IEA goals and objectives.

4. Internationally, energy security may be viewed as an objective which Canada shares with many other countries and, in particular, with the other member countries of the International Energy Agency. A number of the papers address the international aspects of energy security and the benefits to be derived from collective action.

Approaches to Energy Security

5. Domestically two different kinds of measures are required to respond to the security issue: those measures which are intended to protect Canadians in a supply disruption; and those which are intended to reduce Canada's vulnerability to such effects over the longer term. The papers identify several measures which could be considered for future action by governments and by the private sector in each area.

Emergency Measures

6. Emergency Planning is intended to protect Canadians from the adverse impacts of supply disruptions which would interrupt supplies needed to meet the essential needs of Canadians, and is also an important element of Canada's obligations to the International Energy Agency. Papers identified several measures which could be considered for future action by governments and the private sector, both in the event of a national emergency declared under the existing Energy Supplies Allocation Act and in situations leading up to a disruption.

7. Examples of options discussed include:

- demand restraint; for example, voluntary measures to reduce transportation consumption in an emergency or mandatory short-term restrictions on vehicle use;

- oil storage, especially in areas most vulnerable to a supply interruption;

- diversion of energy exports to serve the domestic market;
- use of shut-in and surge production to meet short-term needs; and
- review and strengthening of emergency procedures under both the IEA and ESAB.
- the maintenance of the present operation of the Sarnia/Montreal Pipeline as a complement to emergency measures.

Effective Use of Energy Resources

8. As well as planning for emergencies, all papers reflect a common concern with the long-term development of Canada's energy resource wealth. Development of energy resources not only contributes to economic growth and employment, it can also reduce Canada's vulnerability to the adverse effects of supply disruption in the longer term. However, development of many energy resources is characterized by relatively high degrees of risk. The fall in oil prices and the instability in international oil markets have increased the risks faced by developers of both conventional and non-conventional oil resources. Large projects face even greater risks - long lead times, difficult technologies and hostile operating environments. Many papers note that the special characteristics of the energy sector may require action by governments.

9. Many papers emphasized the role of demand reduction as well as supply enhancement. Demand reduction and the use of alternative energy resources can increase the choices available to consumers in energy markets, contribute to the productivity and flexibility of the energy sector and do so in a way which involves little or no impact on the natural environment. Opportunities for conservation are also spread evenly across regions.

10. While attractive in many ways, diffusion of these technologies may also face special difficulties - lack of awareness by consumers; reluctance to try new technologies; volatile energy prices which make the value of energy savings difficult to predict; and institutional and regulatory barriers.

11. Papers identified a number of options with respect to supply enhancement and demand reduction which should be considered by both levels of government and by the private sector:

- encouraging increased domestic production of all forms of energy within an economic framework by addressing the special risks which characterize the energy sector;

- assuring the central consuming region continuous access to Canadian oil reserves.

- continued development of more competitive and more flexible energy markets through reduction in barriers to trade as well as support for innovations in energy use;

- promotion of economically attractive energy conservation through cost-effective targetted programs and the reduction of institutional, regulatory economic and fiscal barriers, support for basic energy research and development;

- the development of transportation infrastructure to meet the needs of increasingly diverse and competitive energy markets.

Oil Transportation Issues

12. Two papers (from the governments of Canada and Quebec) on the Sarnia-Montreal pipeline concluded that there is a great deal of uncertainty about the longer-term commercial future of the line. While it appears likely that the line will continue in commercial use over the next three-to-five years, future trends in oil prices, domestic production and demand will determine whether a west-to-east flow into Montreal can be maintained into the 1990s.

13. The Government of Québec's discussion papers show that the Sarnia-Montreal pipeline is an essential element of energy security in Canada because of the direct access it gives Eastern Canada to Western Canada resources. This paper suggests that measures should be adopted in the near future in order to give the Sarnia-Montreal section a greater flexibility as to the kind of energy resources it can transport.

14. Papers noted the key role of the Sarnia/Montreal pipeline in giving Quebec and, in emergencies, all of eastern Canada, access to domestic light crude oil. The future of the line is thus important both from the point of view of emergency planning and from the point of view of effective use of domestic energy resources. Should review by governments of options for line become necessary, consideration of both aspects of its role in energy security will be

The Regional Dimension

15. While papers submitted to the working group showed many areas of common agreement, they also revealed a number of differences in emphasis and perspective, often reflecting differences in regional resource endowments and economic circumstances. Papers presented by the Atlantic provinces emphasized their total dependence on foreign oil and lack of access to alternatives in energy markets. Papers therefore stressed the need for enhanced emergency preparedness; adequate attention to the development of regional energy resources (hydro-electricity, offshore oil and gas, coal, renewables and conservation) and a reduction in barriers to energy trade with other provinces.

16. The paper prepared by Québec draws attention to the forecast increase in Québec's international oil imports. It states that the solution to the problem of energy supply security that this situation may create is the maintenance of an access to Western Canada oil reserves through the Sarnia-Montréal pipeline and an increased diversity of the types of hydrocarbons being shipped in the pipeline.

17. Ontario urged greater attention to conservation and renewable energy to further increase the range of options available to consumers. They also expressed concern over the future of transportation infrastructure required to maintain access to energy supplies as markets evolve over time.

18. Papers prepared by western producing provinces recognized the value of competitiveness and diversity in energy markets, but stressed the contribution that development of indigenous oil and gas resources could make to economic growth and development as well as energy security. They detailed the special problems facing oil and gas producers and emphasized the need for government action within an economic framework if such resources are to make their maximum contribution to investment employment and growth.

19. The close connection between energy security and economic development was noted by several papers. Federal, provincial and territorial policies, implemented on a cooperative basis, will help to promote equilibrium in energy markets, reduce excessive fluctuations in prices and ensure that the energy sector continues to support substantial growth and reduced unemployment, which are essential to economic and social well-being.

GOVERNMENT OF ALBERTA

1. Nature of Problem

- In the absence of new domestic supplies of light oil, imported crude will be required in increasing quantities by Canada. The consumers of this oil will be mainly in Atlantic Canada, Quebec and Ontario.

- Increasing import dependence on the part of Canada means increasing vulnerability to disruptions in world supply.

- The objective of ensuring security of supply is both to reduce planning uncertainty over the long term and to minimize the potential consequences of major disruptions in supply in the short term.

2. Options and Recommendations

Domestic Responses: Long-term Measures

Substitution and Conservation

- While it is important to continue to pursue measures on the demand side that can help reduce Canada's need for imported crude oil, as well as improve our ability to respond to emergencies, Canada will face increasing dependence on crude oil imports if new domestic supplies are not developed.

Oil Supply Enhancement

- Significant additions to Canada's light crude oil production must come from major new projects in the frontiers and oil sands.

- Development in the east coast offshore would provide a major boost to the Atlantic region, including direct and indirect employment, opportunities for economic diversification and an expanded tax base.

- The Beaufort offers an excellent geological potential and the possibility that early commercial development of the larger fields would inspire the development of other, smaller discoveries.

- The upgraded oil sands resource of western Canada already makes a sizeable contribution to Canada's light oil needs. The prospects for developing this resource revolve around upgrading, where investments in new technologies and design could help make Canada a leader in the field.

- Both the provincial and federal governments have acknowledged that the risks and constraints faced by large, capital-intensive projects in the prevailing investment climate must be reduced. There is a role for governments to play in alleviating these risks and difficulties.

- Alberta would like to propose a starting point for an aggressive pursuit of potential oil supply projects on a case-by-case basis. Alberta is willing to commence discussions on a number of in situ, oil sands mining and upgrader projects.

- Projects will be considered in terms of the net social benefits they would confer to a region and the nation.

- Both the costs and benefits of developments will be shared by governments. This includes governments of consuming provinces having the opportunity to invest directly in major supply projects.

- Assistance will be geared toward overcoming initial constraints to development proceeding, rather than being a permanent form of support. As conditions improve, governments will either be able to phase out their assistance, and/or receive a return on their initial support.

- To accommodate federal objectives regarding corporate tax reform, assistance will be outside the corporate income tax system.

- Any measures adopted must be consistent with Canada's obligations under any free trade arrangements.

GOVERNMENT OF SASKATCHEWAN

1. Nature of Problem

- Based on the latest NEB energy supply and demand study, the most serious energy security issue facing Canada in the immediate future is the prospect of a growing dependence on imported light oil. Oil prices will have a major impact on the level of import dependence.

- If Canada becomes overly reliant on imported oil, we run the risk of supply disruptions and economic dislocations due to price shocks.

2. Options and Recommendations

- Fundamental elements of an energy security strategy must include competitive market prices, unrestricted energy trade with other provinces and countries and investment decision making based on economic merit.

- There are significant regional and national economic benefits associated with the development of Canada's oil resources.

A. Domestic Responses: Emergency Measures

- Saskatchewan supports Canadian efforts through the IEA to develop and provide for emergency sharing and allocation plans.

- Shutting in oil production and/or further restricting oil exports to enhance supplies in the event of an emergency are ineffective and totally unacceptable measures to Saskatchewan.

B. Domestic Responses: Long-Term Measures

Oil Supply Enhancement

- A healthy and stable domestic oil industry is necessary to provide Canada with the ability to develop its oil supplies in the most timely, efficient and cost-effective manner.

- Saskatchewan has significant crude oil potential, primarily in the form of heavy oil, which can contribute to a secure oil supply for Canada.

- Costly and technically difficult enhanced oil recovery methods are required to unlock Saskatchewan's heavy oil potential.

- Removal of the depletion allowance as proposed in the federal tax reform paper will have a negative impact on EOR development.

- Governments have a role to play in promoting research aimed at improving recovery technology.

- Given that much of Canada's future oil supply potential is in the form of heavy oil and bitumen, upgrading will be required to facilitate crude transportation and provide domestic refineries with a readily usable feedstock form.

Substitution and Conservation

- Ethanol produced from grain has the potential to contribute to transportation fuel supply as an environmentally acceptable octane enhancer and gasoline extender.

THE GOVERNMENT OF ONTARIO

The Government of Ontario believes that Canadian energy security must continue to be a national priority. This means ensuring that adequate supplies of energy are available at reasonable cost to meet the present and foreseeable needs of Canadians. Oil supply security in light of increasing dependence on imported oil is a major concern, but security of supply of natural gas and electricity is also important.

Ontario put forward five key goals and objectives for Canada's national energy policy at the federal-provincial-territorial Energy Ministers' Conference in January 1987. In brief these are:

- Canada must achieve significant further improvements in energy efficiency;
- Canada should develop new energy supplies to enhance energy security and to promote regional economic development;
- energy exports should not compromise national energy security;
- governments should foster the research and development of new energy technologies;
- Canadian energy prices must be competitive.

In Ontario's view, increasing energy efficiency and thus reducing the need for future energy supplies should be the highest priority. Despite recent gains, Canada still lags behind other countries in energy efficiency, and there remains an enormous potential for cost-effective investments in more efficient energy use. To this end, Ontario recommends that:

- Governments should make a commitment to an active program to promote energy efficiency and conservation;
- energy efficiency should be emphasized when new investments are being made in long-lasting capital stock;
- reduced dependence on oil should continue to be a national priority, and Governments should look beyond the short-term to the likelihood of prices rising in the future.

Government leadership is important in improving energy efficiency. The federal government should provide a high level of financial support for research and development of new energy-efficient technologies. In some markets standards and guidelines are the most appropriate approach. The federal government should prepare a national program of energy efficiency standards for new appliances, including refrigerators, freezers, air-conditioners, washers, dryers, dishwashers, heat pumps, water heaters and furnaces. The National Building Code's standards for energy efficiency in new housing should also be updated.

Ontario will continue to play a significant role in energy efficiency. The province will facilitate the adoption of national energy-efficiency standards within its jurisdiction, and will provide leadership in its own buildings and operations. Ontario will match federal iniatives in funding of new energy-efficient technologies under the Canada-Ontario Memorandum of Understanding.

New crude oil supply developments offer a contribution to future energy security to offset the expected decline in conventional oil production. Ontario recommends that it can be beneficial to go ahead with large new oil supply projects sooner than market forces might justify, when the regional development benefits are added to the contribution to future energy security. Policy should aim to reduce the risks that may prevent the development of otherwise economic oil reserves. The governments of Canada, the producing provinces and territories should work together to develop appropriate means of encouragement.

The contribution of light crude oil and natural gas from conventional areas should be maximized. Production can be enhanced by improvements in exploration and methods of extraction. The governments of Canada and the producing provinces should ensure that the return to producers provides adequate incentive for exploration and development.

The economic benefits of energy exports must be weighed against the effects that unchecked exports might have on Canada's energy security. Preserving a sufficient supply for Canadian needs has long been a mainstay of national energy policy. With respect to natural gas exports, Ontario has proposed significant adjustments to the National Energy Board's domestic supply protection test, which would provide producers with greater market access and increased cash flow while protecting domestic supplies. Alternative proposals, which would overturn established export regulation approaches in favour of reliance on contractual commitments, are not acceptable.

GOVERNMENT OF QUEBEC

ENERGY SECURITY PAPER

1. Nature of Problem

- In the short run, energy security can be defined as the ability to react effectively to supply disruptions or price shocks due to the fear of shortages.

- In the medium-to-long run, security of supply requires the availability of sufficient quantities of all energy sources at competitive prices.

- In 1985, 50 per cent of Canadian imports of crude were destinated for Quebec. The NEB forecasts that this proportion could increase to 85 per cent by 1995 (with the development of Hibernia). Hence, the problem of energy security for Canada is chiefly a problem of energy security for Quebec.

2. Options and Recommendations

A. Domestic Responses: Emergency Measures

- Keeping in operation the Sarnia-Montreal pipeline gives to Quebec refineries the possibility of increasing rapidly purchases from western Canada.

- If, despite other supply and demand measures, Quebec were to be isolated from the rest of Canada, it would then be necessary to consider strategic stockpiles to ensure the security of Quebec's supplies.

- For Québec, other measures to increase Canadian supply and the uninterrupted operation of the Sarnia-Montreal pipeline are preferable.

B. Domestic Responses: Long-Term Measures

Certain measures could be envisaged to maintain a high level of energy security and reduce Canada's dependence on imported oil, namely:

Oil Supply Enhancement

- The increase of domestic crude production through appropriate fiscal measures, particularly for exploration.

- The production of light crude from bitumen through support to the start-up of economically viable projects and the development of new technologies.

- The development of light crude reserves in Canada's frontier regions should be accelerated.

- The increase of heavy crude in Canada, particularly in the refineries of eastern Canada.

Substitution and Conservation

- The use of natural gas liquids in the petrochemical industry and of oxygenated fuel in the transport sector are two possible actions on the demand side.

- Quebec has achieved greater energy security though an increase in energy efficiency and the market penetration of electricity, natural gas and wood. This evolution will continue in the future but at a slower pace.

- It would be difficult for Quebec to increase further conservation and the penetration of electricity beyond what is already forecasted.

GOVERNMENT OF QUEBEC

SARNIA-MONTREAL PIPELINE PAPER

1. Nature of Problem

- The Sarnia-Montreal pipeline is an essential element of Canada's energy security because it provides eastern Canada with direct access to western Canadian resources. This fundamental function of the pipeline is now called into question because of an expected decline in Canadian light crude production. Such a decline places at risk supply availability first for Quebec and then for Ontario.

2. Options and Recommendations

- In the event of a decline in light crude supply from western Canada, the Sarnia-Montréal pipeline is the most vulnerable link of the transportation infrastructure. Hence, corrective measures should be adopted in the near future in order to give the Sarnia-Montréal section a greater flexibility as to the kind of energy resources it can transport. For the light crude currently shipped to Montreal, it would be possible to substitute:

    . a larger quantity of heavy crude oil (according to an Econosult study, Montreal refineries could process 50,000 barrels per day of this type of crude);

    . transportation of unfinished products as currently done by Petro-Canada between Clarkson and Pointe-aux-Tremble;

    . transportation of natural gas liquids as proposed by Soligaz.

- To ensure the adequacy of supplies it could need between now and 2005, Ontario could rely on a link between the the U.S. transcontinental network and Sarnia. This would add another element to the transportation infrastructure of eastern Canada.

- As shown by the Econosult study, this option is technically feasible (available capacity in the American network would be sufficient to satisfy Ontario's needs). Economically, it is also preferable to the reversal of the Sarnia-Montreal pipeline since transportation costs would be smaller by at least $0.65 per barrel over the period.

GOVERNMENT OF NEW BRUNSWICK

1. Nature of Problem

- The goal of self-sufficiency in oil supply should be secondary to that of overall security of supply in energy in all parts of Canada.

2. Options and Recommendations

A. Domestic Responses: Emergency Measures

- Consideration should be given to:
  - an "Energy Swap" treaty with U.S. which would provide crude oil or products to eastern Canada in exchange for gas or electricity from Canada;
  - movement of crude by tanker from Montreal to Eastern Canada and/or reversal of the Montreal-Portland pipeline; and
  - strategic underground storage in salt caverns such as at Dorchester, New Brunswick.

B. Domestic Responses: Long-Term Measures

Oil Supply Enhancement

- Development should be determined by market forces rather than by government subsidization. Governments should not be heavily involved in "private" energy developments except perhaps in infrastructure costs. Subsidies must also be considered in light of potential countervailing measures.
- Consideration of financial assistance to energy projects should not only look at the viability of a project and its social benefits but also if other energy projects would achieve the same result at less cost.
- Governments should work towards creating an energy investment climate conducive to private sector investment through:
  - removal of obstacles to foreign investment;
  - reasonable taxation; and
  - simplification of project approval procedures.

Substitution and Conservation

- Governments should sign energy agreements which embrace the total energy spectrum, not just conservation and alternate energy as at present, so that substitution and security will be under constant review and funding directed to the most cost-effective areas.

- Canada should encourage the use of dual-fuel systems (gas/oil) in areas of the country served by gas.

- Studies are underway into cogeneration and parallel generation economics, which may identify projects with favourable economics. Similar projects should be examined for biomass fuels in other provinces.

- Obstacles to the present relatively unhindered trade in electricity must be quickly identified and resolved with our U.S. counterparts.

- New Brunswick remains committed to Canada's nuclear energy program as a safe and secure form of energy supply. Additional nuclear generation capacity at Lepreau would further enhance energy security. A method of reducing the risk factor of 'up front' capital to the level of equivalent coal or oil units is required.

- Modification of the 1000 MWe Coleson Cove oil-fired generation plant to burn coal.

- Develop coal burning technologies which will continue to make indigenous high sulphur coal an economic fuel supply.

- Develop additional hydro storage and capacity on the Saint John River.

Energy Research and Development

- Federal government should increase funds for energy research.

- Nuclear energy requires further research and development on waste disposal as well as on public information.

C. Infrastructure

- The economics of extending the existing gas transmission system through the Maritimes should be examined and compared to alternative investments in energy supply.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR

1. Nature of Problem

- Canada has an abundance of energy supplies in many forms, but faces severe national supply shortages in the key commodity of light crude oil.

- National energy policy must once again aim towards achieving the objective of national self-sufficiency in oil, and increasing energy supply in other forms where significant opportunities exist.

- The energy supply future of Newfoundland is hindered by the inability to link energy-rich Labrador hydro sources with the Island.

- The interprovincial barrier to the transmission of electricity has been an insurmountable obstacle to the development of hydro resources in Labrador.

- Electricity prices are the second highest in Canada.

2. Options and Recommendations

A. Domestic Responses: Long-Term Measures

Oil Supply Enhancement

- In order to encourage the development of Hibernia and other frontier fields, governments in Canada must share with the private sector the risks associated with their development.

- Governments in Canada must encourage renewed levels of exploration and delineation drilling within an appropriate economic environment.

Substitution and Conservation

- It is recommended:

  - that all Canadians have fair and equitable access to Canadian energy supplies. This requires that there be effective federal government regulation of inter-utility transmission access to markets for surplus electrical power and energy; and

  - that there be effective federal government regulation to determine existing Canadian requirements used to determine the level of energy

classed as surplus to Canadian needs, and to ensure equitable export revenue sharing between Canadian exporting utilities and other utilities providing inter-utility transmission."

- It is recommended that governments in Canada build upon current federal-provincial Memoranda of Understanding to provide a long-term framework for funding programs in energy conservation and alternative energy development.

B. Infrastructure

- An electricity interconnection between the Island and Labrador would provide long-term stably-priced electricity to Newfoundland consumers, eliminating the reliance on imported oil for thermal generation.

GOVERNMENT OF NOVA SCOTIA

1. Nature of Problem

- Short-term security means the ability to obtain sufficient crude oil supplies during any disruption to minimize hardship.

- Long-term security is the reduction of Nova Scotia's vulnerability created by an overdependence on foreign crude oil.

2. Options and Recommendations

A. Domestic Responses: Emergency Measures

- Transporting western Canadian crude oil to eastern Canada -- however, options are plagued by concerns over western Canadian light crude availability, tanker ship capacity, time delays and ice problems in the St. Lawrence River during winter.

- Swap arrangements with the United States -- However, no formal mechanism has been agreed upon to ensure that this arrangement would be put into practice or to guarantee the Americans' willingness to participate in swap arrangements.

- Strategic crude oil reserve in Atlantic Canada -- Relatively low crude oil prices make this option more amenable at this time, but finite availability of supplies under this option is a concern.

- Petroleum product supplies allocation and demand restraint measures -- Measures already formulated remain untested. In addition, no acceptable means by which to deal with hardship cases have yet been developed at the federal level leaving these problems open to ad hoc solution.

B. Domestic Responses: Long-term Measures

- Security will be realized through a three-pronged strategy oriented towards the development of greater self-reliance:

  - diversification of the province's energy supply mix;

- encouragement of indigenous fuel supplies; and

- improve the efficiency of energy use.

Oil Supply Enhancement

- The federal and provincial governments must jointly create a fiscal and regulatory environment conducive to the encouragement of the exploration, delineation and development of offshore petroleum reserves associated with Cohasset and other promising oil bearing structures.

Substitution and Conservation

- Development of Scotian Shelf natural gas reserves is a financially viable undertaking despite today's low oil prices. Provincial and federal authorities are initiating discussions aimed at developing a financially attractive package which will get development underway.

- Indigenous coal reserves will remain as a critical ingredient in our future energy supply picture. The ongoing viability of this industry must be sustained by continuing to strengthen the Cape Breton Development Corporation and through continued support for research into alternate coal utilization technologies.

- The investigation into and demonstration of renewable energy supplies must be ongoing. Further efforts should be directed toward increasing consumer acceptance of this fuel through information transfer activities and demonstration programs, and by making investments in wood chips more technically and financially attractive. Additional government support will be required to see that this potential is realized.

- The federal government, working cooperatively with the provinces, is encouraged to extend the life of a number of programs (conservation) under joint operation so that the impressive gains of the past can be built upon and greater energy efficiency achieved.

GOVERNMENT OF PRINCE EDWARD ISLAND

1. Nature of Problem

- Prince Edward Island (P.E.I.) is concerned about its high dependency on foreign crude, as well as electricity availability and pricing.

- The province feels that the security and availability of all forms of energy, and the management of energy demand, should be an important priority of both the federal and provincial governments.

2. Options and Recommendations

A. Domestic Responses: Emergency Measures

- A short term option, which is clearly second best to an oil pipeline to Atlantic Canada, is the establishment of a strategic petroleum reserve in Atlantic Canada. A government-enforced system should be researched and discussed with the Atlantic Provinces.

B. Domestic Responses: Long-Term Measures

Oil Supply Enhancement

- The development of Canada's conventional oil and gas fields must continue to be encouraged.

- It is important that the necessary infrastructure and incentives are put in place immediately to encourage the production of synthetic light crude from bitumen, and the development of such frontier areas as the East Coast offshore, the Beaufort Sea, the MacKenzie Delta and the Arctic Islands.

Substitution and Conservation

- Acquire new firm generating capacity by October, 1988.

- Acquire a significant quantity of long-term firm capacity at guaranteed prices.

- Ensure the maintenance of on-Island emergency and peaking capacity.

- Continue to intervene in regulatory proceedings to ensure access to electricity scheduled for export.

- Diversify electricity sources, in order not to be dependent on one fuel.

- P.E.I. is committed to the promotion of biomass as a fuel and to the development of a woodchip supply industry. The federal government is encouraged to continue its assistance in this initiative.

- P.E.I. has identified the following conservation initiatives as areas for discussion and action by government:

    - Enforcement of conservation standards.

    - Provision of conservation incentives and information.

    - Establishment of national efficiency standards, incentives and information.

    - Support for research and development of efficiency and alternate energy technology.

    - Support for research and implementation of innovative load management techniques by electrical utilities.

Other

- The role of the National Energy Board in regulating energy exports should be reinforced.

- Provinces should examine the extent of public regulation of their own utilities.

C. Infrastructure

- The federal government is encouraged to evaluate the feasibility of constructing an oil pipeline to Atlantic Canada, and to consider the development of natural gas transportation and distribution systems for the Maritimes, either from western or eastern supplies.

- Upgrade the New Brunswick cable connection as soon as possible.

- Provinces should actively consider the creation of an inter-provincial electricity grid.

GOVERNMENT OF THE NORTHWEST TERRITORIES

1. **Nature of Problem**

   - Canada's energy security has been, and should continue to be, a central objective in Canada's energy policy.

   - Government financial support for major energy projects is justified to achieve energy security and self-sufficiency. Without such support, Canada may continue to import oil which could be produced economically using non-conventional and frontier resources, and Canada's ability to protect itself from volatile prices and supplies from increasingly less reliable sources will be compromised.

   - There is little exploration and less development taking place North of 60°, yet some of Canada's best prospects for future utilization lie in the northern frontier. The dismantling of the industry's exploration capability will result in significant delays and in higher costs when activity returns to the area.

2. **Options and Recommendations: Long Term Measures**

   - Canada's domestic supply capability has a fundamental influence on our nation's energy security position. Priority should therefore be given to measures which will increase the ability of Canada to seek, develop and research alternate energy sources, and increasingly provide for our own energy needs.

   - The greatest opportunities for major new sources of supply lie in non-conventional and frontier energy projects. These projects require long lead times and may not be economic under current oil prices. Given these conditions, government support should focus on measures which can be taken to minimize project lead times, and on the development of realistic incentives so that new sources of supply can be brought into production as soon as justified by market demand. The capability of the Canadian petroleum industry to undertake major new energy projects with minimum delay must be enhanced.

   - For major projects which are fundamentally economic and have private sector support, governments should be prepared to offer assistance to reduce risks, encourage

early project initiation and ensure regulatory "red tape" does not unreasonably discourage development investment and activity.

- The present approach followed by the federal government of reviewing projects on a case-by-case basis should be retained, and any new initiatives recommended by the Working Group should be supportive of eventual project-specific agreements.

GOVERNMENT OF CANADA

1. The Nature Of The Problem

- The debate on energy security, both in Canada and elsewhere, has focussed primarily on the availability and price of oil supplies.

- Security of oil supply means adequate assurance that, in an emergency, sufficient oil supplies are obtainable by all Canadians.

- Security also means the protection of the economy from sudden sharp increases in the price of oil and close energy substitutes.

2. Options

A. International Responses

- An effective path to enhancing oil security exists through greater collective action with our trading partners -- Canada can assist by continuing efforts to break down those institutional and technical barriers which prevent energy supply or conservation opportunities that are economic from being realized.

- Canada also can contribute through participation in the IEA Emergency Oil Sharing System.

- Demand restraint and stock drawdown offer the greatest scope for action among IEA countries in a pre-emergency situation -- Canada needs to review its capabilities.

B. Domestic Responses: Emergency Measures

- Demand restraint -- involving voluntary or obligatory restrictions on non-essential oil consumption -- and emergency stocks seem to be the most appropriate and cost-effective options for the short-term type of disruption that is most likely to occur.

- Allocation and rationing controls would be useful measures if a supply disruption were severe or prolonged.

- "Shutting in" oil production capacity to enhance our supplies in an emergency would involve a cost to Canada that is 5 to 10 times greater than the cost of establishing emergency oil stocks.

- Enhanced capacity to switch immediately off oil to other fuels could make a marginal contribution where costs permit.

- Diverting exports to the domestic market in an emergency could be contrary to our IEA obligations. Cutting back exports also would raise major questions about our reliability as a trading partner.

- Domestic price controls would not protect Canada from the negative effects of a world economic slowdown induced by high oil prices.

C. Domestic Response: Long-Term Measures

Oil Supply Enhancement

- Subsidizing major energy projects which are not fundamentally economic is a potentially expensive way to enhance Canada's security against an import disruption.

- Steps have been taken to encourage worthy projects to proceed. The federal government will follow a case-by-case approach.

Substitition and Conservation

- There is further scope for reducing oil demand by conservation and substitution.

Energy Research and Development

- The continued pursuit of R&D activity should provide a sound technical basis for a diversified future Canadian energy economy, not as heavily dependent on conventional sources of oil.

Oil Import Diversification

- There appears to be little room to enhance oil security through diversifying imports.

D. Infrastructure

- Some emergency measures require an adequate means for transporting crude oil from western to eastern Canada -- with implications for the Sarnia-Montreal pipeline.

Government of Canada Views on the Sarnia-Montreal Pipeline

Nature of the Problem

- in the early 1990's a potential shortfall in the supply of western Canadian light crude oil to meet the needs of Ontario and western Canadian refiners could arise.

- A development in this nature could lead to a need to develop supply arrangements for both Montreal and Ontario refineries.

- If that occurred, decisions about the future of the Sarnia-Montreal line would be necessary.

Options

West-to-East Flow

A continued west-to-east flow through the line could continue to be economically viable if there were continued movement of non-light crude supplies to Montreal, as well as potentially some additional heavy crude oil for export and to displace existing Quebec imports.

Mothballing

Closure and mothballing of the line could occur for a few years, possibly in combination with another course of action.

Reversal

A reversed Sarnia-Montreal pipeline could improve security of supply for Ontario refineries, but it would make commercial sense only if its tariffs were comparable to, or less than, those on the U.S. mid-continent system.

Yo-Yo Operation

A yo-yo operation may also represent only an interim solution, until the line is reversed on a long-term basis. From a security of supply perspective, a relatively small incremental capital cost over that required for a simple reversal would be needed to maintain an emergency west-to-east flow possibility, after a possible future reversal.